

## Marine Life Protection Act Initiative



### Marine Birds and Mammals of the MLPA South Coast Study Region

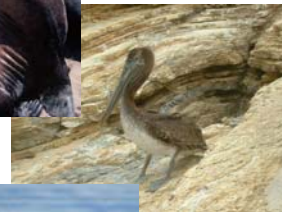
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MLPA Master Plan Science Advisory Team

Presentation to the MLPA Blue Ribbon Task Force  
January 22, 2009



### Marine Birds and Marine Mammals

- Long-lived, often >20 years
- Produce few offspring, but provide high amount of parental care
- Feed at the top of marine food webs





## Threats

- Human disturbance (e.g. boats & shoreline recreation)
  - loss of young-of-the-year
  - loss of breeding and resting sites
- Fisheries bycatch
- Prey availability
  - Change due to anthropogenic or ecological activities
  - Disturbance at foraging sites

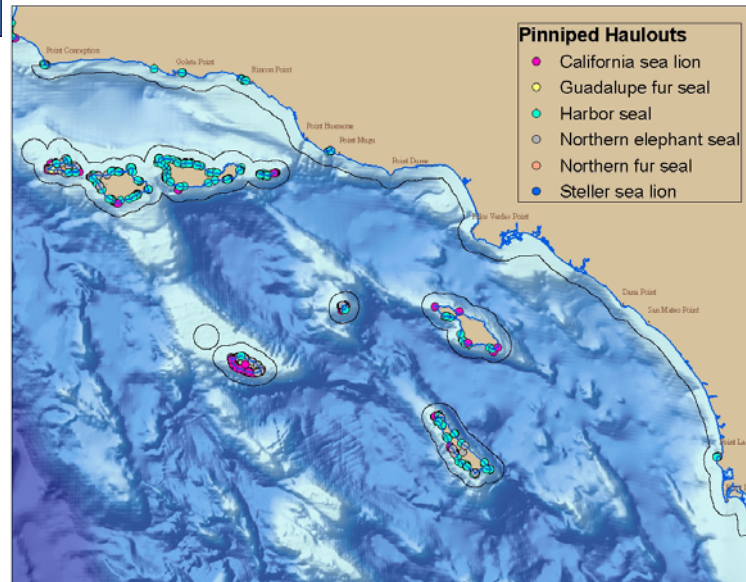


## Marine Mammals and Sea Turtles

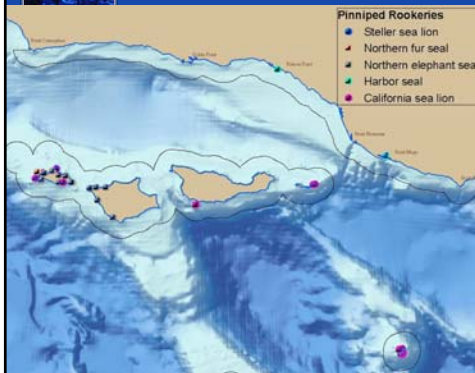
- 5 species of pinniped
- > 30 species of cetacean
- 1 species of fissiped
- 2 species of sea turtle



## Important Pinniped Haul-outs



## Important Pinniped Rookeries

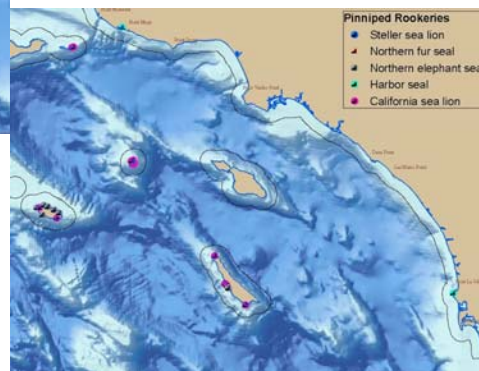


## Harbor seals

- Mainland, northern Channel Islands, Santa Barbara Island, San Clemente Island

## California sea lions

- San Miguel, San Nicholas, Santa Barbara and San Clemente islands





## Coastal Bottlenose Dolphins

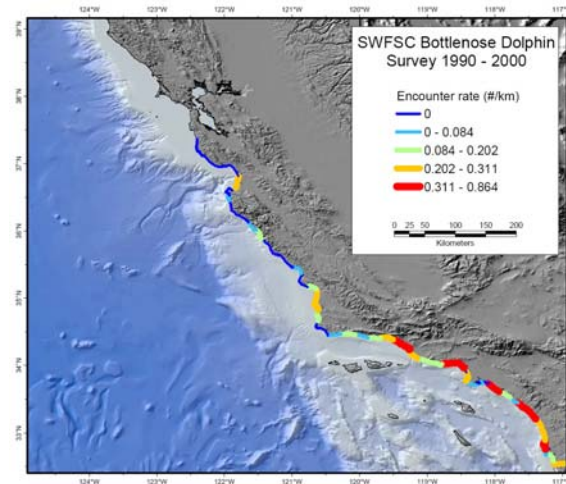


Figure: NCCOS A biogeographic assessment of the Channel Islands NMS web site  
Data from 15 aerial surveys



## Marine Mammals to Benefit

### Pinnipeds

- Harbor seal
- California sea lion



### Cetaceans

Coastal Bottlenose  
Dolphin

Long-beaked  
Common Dolphin



## Marine Birds

- Seabirds – >40 species
- Shorebirds – >25 species
- Waterfowl – >25 species
- Marsh Birds – 6 species



## Terrestrial Birds in Marine Food Webs

### Fish Predators

- Bald eagle
- Osprey



### Seabird/Shorebird Predators

- Peregrine falcon
- Northern harrier
- White-tailed kite







## Protection of Breeding Sites

### Disturbance at Breeding Sites

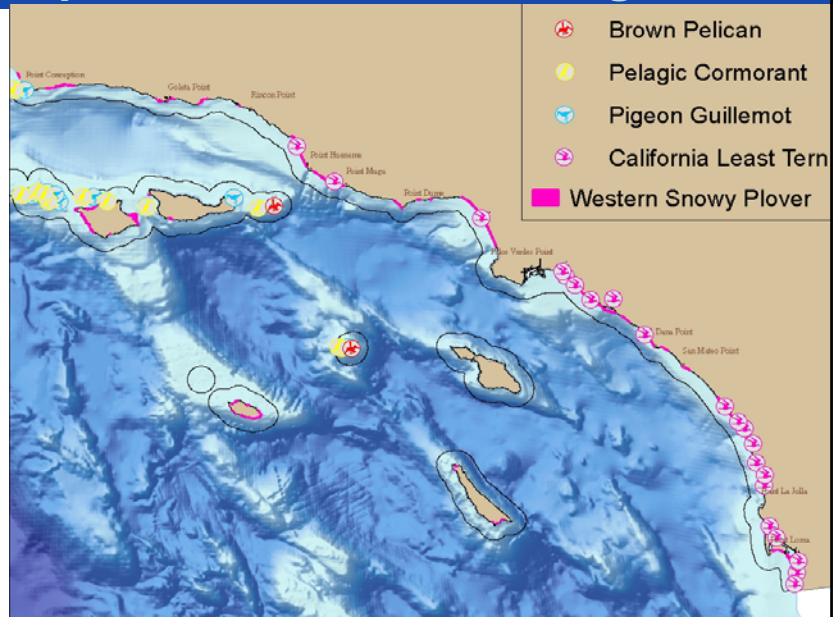
- Exposes young to predation
- Exposes young to solar radiation.
- Can lead to short-term and long-term abandonment of breeding site

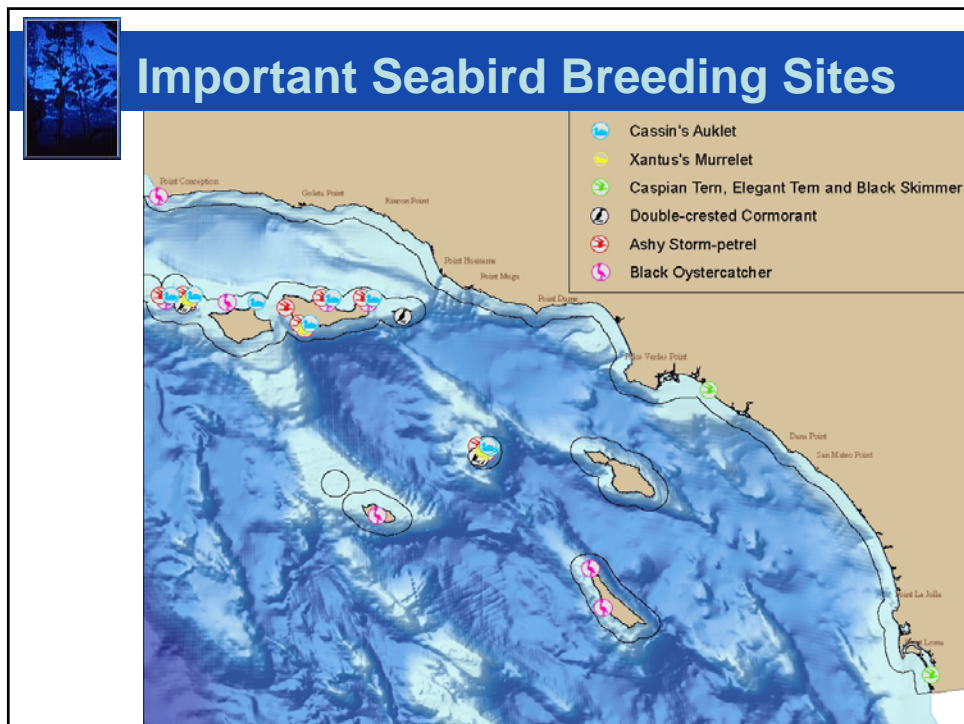
### Examples of breeders:

California least tern, pelagic cormorant, harbor seal, California sea lion



## Important Seabird Breeding Sites





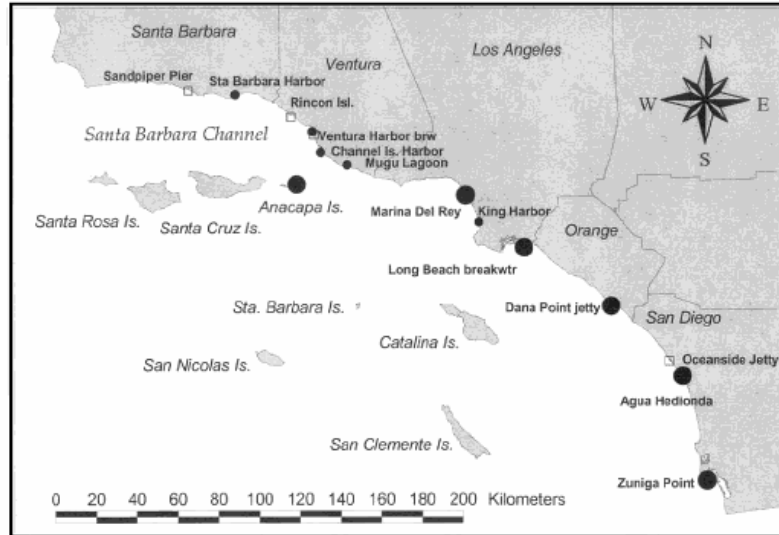
### Protection at Roost/Haul-out Sites

Many seabirds and marine mammals require areas to rest for energetic and thermoregulatory purposes

Examples: California brown pelican, Brandt's cormorant, Pelagic cormorant, harbor seal, California sea lion



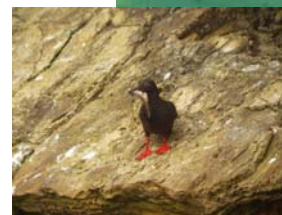
## Important Brown Pelican Roost Sites



## Protection at Foraging Sites

### Nearshore and Near-Colony Foraging

- While breeding, birds and mammals are central place foragers.
- Some species forage mostly within three miles of breeding sites
- Examples: pigeon guillemot, Brandt's cormorant, pelagic cormorant, California least tern, harbor seal







## Protection at Foraging Sites

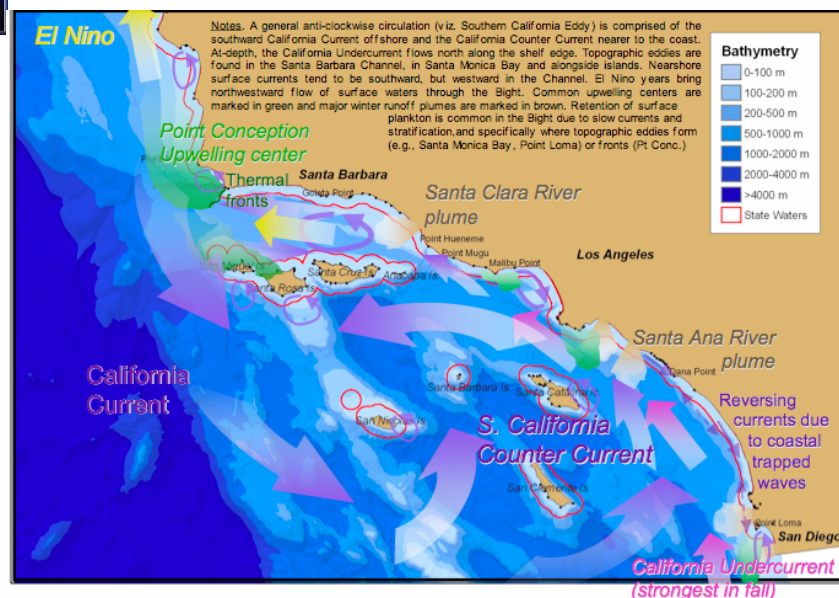
### Aggregations at 'Hot Spots'

- Many hydrographic features within Southern California Bight can serve to concentrate prey
- Though prey tend to be highly mobile (e.g., anchovies), they have greater probability of being found at 'hot spots'

Examples of hot spot predators:  
California brown pelicans, sooty shearwaters, California sea lions, common bottlenose dolphin



## Circulation in the Southern CA Bight

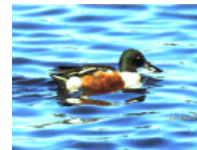




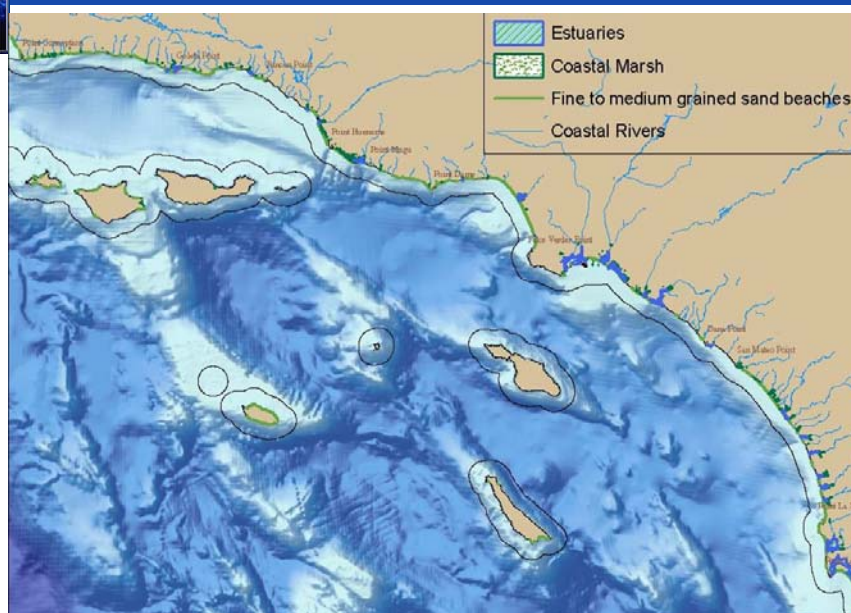
## Protection - Bays, Estuaries, Beaches

- Bays and estuaries provide critical resting and foraging habitat for many resident and migrant marine birds
- Threats at estuaries include loss of habitat, disturbance at resting and foraging areas, and hunting of waterfowl
- Threats at beaches include loss of habitat and disturbance at resting and foraging areas

Examples of Bay/Estuary Residents:  
western snowy plover, great blue heron,  
northern shoveler



## Bays, Estuaries, Beaches in Southern CA





## Conclusions – Marine Birds/Mammals

- Direct and indirect benefits from MPAs:
  - **Direct: Decreased disturbance at breeding, resting and foraging sites**
  - **Indirect: Protection of prey populations**
- Study region contains regionally and globally important breeding, roosting and foraging areas
- Northern Channel Islands have among largest concentration and highest diversity of marine birds/mammals in California.
- Southern California mainland also contains vital breeding habitat for several seabird species
- Several species would benefit from protection of nearshore foraging areas within state waters



Thank you!



Any questions?